

What is claimed is:

1. An inspection system for verifying package contents, the system comprising:
  - a spectrometer, the spectrometer having an input for receiving light energy;
  - a light energy aggregator comprising
    - a light energy input terminal; and
    - a light energy output terminal, the light energy output terminal coupled to the spectrometer input; and
    - at least two sample probes coupled to the light energy input terminal, wherein each of the sample probes is configured to direct light energy from a source to the light energy input terminal.
2. The inspection system of claim 1, wherein the light energy input terminal comprises a plurality of connectors adapted to receive a plurality of fiber optic cables.
3. The inspection system of claim 1, wherein the light energy aggregator is adapted to generate an average light energy value based on the light energy obtained from the at least two sample probes.
4. The inspection system of claim 3, wherein the light energy aggregator is further adapted to transmit the average light energy value into the spectrometer input.

5. The inspection system of claim 1, wherein the package contents comprise a plurality of individual items and wherein the source is near-infrared radiation reflected by one of the items in the package.
6. The inspection system of claim 5, wherein the inspection system comprises a separate probe for each item in the package.
7. The inspection system of claim 1, wherein the package contents are contained in a blister pack including an array of tablet wells.
8. The inspection system of claim 1, wherein the spectrometer is adapted to verify whether the package contents conform to a predetermined standard based on an average of reflectance measurements taken by the at least two sample probes.
9. The inspection system of claim 1, wherein the light energy aggregator comprises a splitter block.
10. The inspection system of claim 1, wherein the light energy aggregator comprises a reflective chamber.

11. The inspection system of claim 9, wherein the light energy aggregator is further adapted to
  - receive a plurality of input cables; and
  - combine the plurality of input cables into a single output cable.
12. The inspection system of claim 9, wherein the splitter block is adapted to bundle a plurality of fiber optic cables and output the bundled cables as a single light source.
13. The inspection system of claim 1, further comprising a processor coupled to the spectrometer and capable of being programmed to analyze the light energy output by the light energy aggregator.
14. The inspection system of claim 1, further comprising a fiber optic cable coupled to each of the at least two sample probes and connecting each of the sample probes with the light energy input terminal.
15. The inspection system of claim 1, wherein the spectrometer input is a field stop formatted as an entrance slit.
16. The inspection system of claim 1, wherein the at least two sample probes each comprise a fiber optic cable having a distal end including a sensor.

17. The inspection system of claim 1, further comprising a near-infrared light source directed substantially toward the package contents.
18. The inspection system of claim 8, wherein the pre-determined standard is obtained through a calibration run.
19. The inspection system of claim 8, wherein the pre-determined standard is obtained by inputting a known value into the inspection system.
20. An inspection system for monitoring a chemical composition of packaged products, the inspection system comprising:
  - a light energy aggregator comprising
    - a light energy input terminal adapted to couple with a plurality of fiber optic sample probes; and
    - a light energy output terminal coupled to a spectrometer;
  - wherein the light energy aggregator is adapted to direct an average reflected light signal through the light energy output terminal; and
  - wherein the average reflected light signal is based on light energy received through the plurality of fiber optic sample probes.

21. The inspection system of claim 20, further comprising a processor coupled to the spectrometer, wherein the processor is capable of being configured to compare a predetermined reflectance signal with the average reflectance signal from the plurality of fiber optic sample probes.
22. The inspection system of claim 21, wherein the light energy aggregator is a reflective chamber.
23. The inspection system of claim 21, wherein the light energy aggregator is a splitter block.
24. A method for verifying the contents of a product package containing a plurality of items, the method comprising:
  - obtaining a reflected light signal from each of the plurality of items;
  - combining the reflected light signals to form a combined reflected light signal;
  - directing the combined reflected light signal into a spectrometer;
  - comparing the combined reflected light signal with a predetermined reflectance signal range; and
  - determining whether the combined reflectance signal falls within the predetermined reflectance signal range.

25. The method of claim 24, further comprising:
  - rejecting the product package if the combined reflected light signal does not conform with the predetermined reflectance signal range.
26. The method of claim 24, wherein the predetermined reflectance signal range is a known value corresponding to the contents of the product package.
27. The method of claim 24, wherein the predetermined reflectance signal range is obtained by measuring the reflectance signal of a controlled sample of the product package.
28. An inspection head for a packaging system, comprising:
  - a probe housing, the housing including a mounting surface;
  - a plurality of sample probes mounted substantially normal to the mounting surface, wherein each of the plurality of sample probes is attached to a first end of a fiber optic cable; and
  - a light energy aggregator having an input terminal and an output terminal; wherein a second end of each of the plurality of fiber optic cables is attached to the light energy input terminal.
29. The inspection head of claim 28, further comprising a spectrometer coupled to the light energy output terminal.

30. The inspection head of claim 28, further comprising a near-infrared light source.
31. The inspection head of claim 28, wherein the light energy aggregator comprises a splitter block.
32. The inspection head of claim 28, wherein the light energy aggregator comprises a reflective chamber adapted to combine light energy received through the input terminal and distribute the combined light energy through the output terminal.
33. The inspection head of claim 28, wherein the light energy aggregator input terminal comprises a plurality of fiber optic connectors; and wherein the output terminal comprises a single fiber optic connector.
34. A method of analyzing reflectance data for a group of individual items, comprising:
  - obtaining a baseline reflectance signal for the group of individual items;
  - obtaining a reflectance signal for each of the individual items;
  - combining each of the individual item reflectance signals to form an average reflectance signal based on the combined item reflectance signals; and
  - comparing the average reflectance signal with the baseline reflectance signal.

35. The method of claim 34, further comprising determining whether the average reflectance value conforms to the baseline reflectance value.
36. The method of claim 34, wherein obtaining a baseline reflectance value for the group of individual items comprises inputting a known value into a general purpose computer and transmitting the known value to an inspection system.
37. The method of claim 34, wherein the group of individual items is contained in a blister package.
38. An inspection system for verifying the contents of a product package, the product package containing a plurality of items, the inspection system comprising:
- means for obtaining a reflectance value from each of the plurality of items;
  - means for combining the reflectance values to produce a combined reflectance value;
  - means for directing the combined reflectance value into a spectrometer;
  - means for comparing the combined reflectance value with a predetermined reflectance range; and
  - means for determining whether the combined reflectance value falls within the predetermined reflectance range.

39. An inspection system for verifying package contents, the system comprising:
- a spectrometer, the spectrometer having an input for receiving light energy;
  - a light energy aggregator comprising
    - a light energy input terminal; and
    - a light energy output terminal, the light energy output terminal coupled to the spectrometer input; and
    - a port for receiving at least two sample probes, wherein the at least two sample probes are coupled to the light energy input terminal and wherein each of the sample probes is configured to direct light energy from a source to the light energy input terminal.